## AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## LISTING OF CLAIMS:

- 1. (currently amended) A scintillator consisting of a crystal of  $Pr_{1-x}Ce_xF_3$  (0 < x < 0.5) in which 0 < x < 0.5.
- 2. (currently amended) The scintillator according to claim 1, characterized in that wherein 0.03 < x < 0.2.
- 3. (currently amended) The scintillator according to claim 1, eharacterized in that wherein said crystal is grown by the a micro pulling down method, a Czochralski method, the a floating zone method, or a Bridgman method.
- 4. (previously presented) A radiation detector consisting of a combination of the scintillator according to claim 1 and a light responding means.
- 5. (currently amended) A radiation inspecting device having the comprising a radiation detector according to claim 4 as the radiation detector consisting of a combination of the scintillator of claim 1 and a light responding means.

- 6. (currently amended) The radiation inspecting device according to claim 5, characterized in that wherein said radiation inspecting device is an X-ray CT scanner.
- 7. (currently amended) The radiation inspecting device according to claim 5, characterized in that wherein said radiation inspecting device is PET (positron emission tomography).
- 8. (currently amended) The radiation inspecting device according to claim [[5]] 7, characterized in that wherein said PET (positron emission tomography) is two-dimensional type PET, three-dimensional type PET, time-of-flight (TOF) type PET, depth-of-image (DOI) type PET, or a combination type thereof.
- 9. (currently amended) The radiation inspecting device according to claim 5, characterized in that wherein said radiation inspecting device is a single device, or a combination type with any one or two of MRI, CT or SPECT, or with two of them.
- 10. (currently amended) The scintillator according to claim 2, characterized in that wherein said crystal is grown by the a micro pulling down method, a Czochralski method, the a floating zone method, or a Bridgman method.

Docket No. 8075-1047 Appln. No. 10/569,488

- 11. (previously presented) A radiation detector consisting of a combination of the scintillator according to claim 2 and a light responding means.
- 12. (previously presented) A radiation detector consisting of a combination of the scintillator according to claim 3 and a light responding means.